What is claimed is:

1. A method of assessing the biological activity of a KIT tyrosine kinase inhibitor against a tumor, which method comprises detecting in a biological sample of said tumor the level of expression of a gene the expression level of which correlates with the biological activity of said KIT tyrosine kinase inhibitor, said biological sample having been exposed to said KIT tyrosine kinase inhibitor.

2. The method of claim 1, wherein the biological sample is a gastrointestinal stromal tumor.

3. The method of claim 1, wherein the KIT tyrosine kinase inhibitor is imatinib or a pharmaceutically acceptable salt thereof.

4. The method according to claim 1, which comprises detecting the level of expression of a nucleic acid sequence provided in Table 2.

5. The method according to claim 1, which comprises detecting the level of expression of a nucleic acid sequence provided in Table 3.

6. The method according to claim 1, which comprises detecting the level of expression of a nucleic acid sequence provided in Table 4.

7. The method according to claim 1, which comprises detecting the level of expression of a nucleic acid sequence encoding Sprouty4A protein.

8. The method according to claim 7, wherein the level of expression of the Sprouty4A gene is detected using an antibody that specifically binds to the Sprouty4A protein.

9. The method according to claim 7, wherein the level of expression of the Sprouty4A gene is detected using a nucleic acid probe or primer which specifically hybridizes to the nucleic acid encoding Sprouty4A protein.

10. The method according to claim 1, wherein the biological sample has been obtained from a mammal to which the KIT tyrosine kinase inhibitor had been administered.

11. The method according to claim 10, wherein said mammal is a human.

12. A method of screening a compound for activity against a tumor, which method comprises contacting mammalian tumor cells with the compound and detecting in said tumor cells an altered level of expression of a nucleic acid listed in at least one table selected from the group consisting of Table 2, Table 3 and Table 4 relative to a control.

13. The method according to claim 12, which comprises detecting the level of expression of a nucleic acid sequence provided in Table 2.

14. The method according to claim 12, wherein expression levels of a nucleic acid sequence listed in Table 3 are decreased by said compound.

15. The method according to claim 12, which comprises detecting the level of expression of a nucleic acid sequence provided in Table 4.

16. The method as claimed in claim 12, wherein said nucleic acid encodes Sprouty4A.

17. The method of claim 12, wherein the mammalian tumor cells are gastrointestinal stromal tumor cells.

18. The method of claim 17, wherein the mammalian tumor cells are a gastrointestinal stromal tumor cell line.

19. The method of claim 18, wherein the gastrointestinal stromal tumor cell line is the GIST882 cell line.

20. A method for determining the efficacy of an anticancer treatment comprising detection of an alteration in expression levels of a biomarker comprising a nucleic sequence provided in a table selected from the group consisting of Table 2, Table 3, and Table 4.

21. The method of claim 20, wherein said biomarker is sprouty 4 and said expression level is decreased in response to effective anticancer treatment.

22. The method of claim 20, wherein the biomarker is MAFbx and said expression level is elevated in response to effective anticancer treatment.

23. A method for determining the efficacy of an anticancer treatment comprising detection of an alteration in post-translation modification of a biomarker comprising a nucleic sequence provided in a table selected from the group consisting of Table 2, Table 3, and Table 4.

24. The method as claimed in claim 23, wherein said biomarker is GAB1, and said post translational modification is phosphorylation which is decreased in response to effective anti-cancer treatment.